

REMARKS:

The courtesies extended to the undersigned by Examiner Jill Culler during the telephone interview held April 27, 2010 are acknowledged and appreciated. As was discussed with Examiner Culler, applicants, their principal representatives in Germany and the undersigned have carefully reviewed the Final Office Action of February 3, 2010, in the subject U.S. patent application, together with the prior art cited and relied on in the rejection of the claims. Both of the independent claims now pending in the application, as well as various ones of the dependent claims, have been amended to more clearly patentably define the subject invention over the prior art cited and relied on in their rejection. Since the application is under a final rejection, a Request for Continued Examination (RCE) is being filed concurrently herewith to provide the Examiner with sufficient time to fully consider these presently amended claims and to conduct additional searching, if it is believed to be necessary. Reexamination and reconsideration of the application, and allowance of the claims is respectfully requested.

As discussed with Examiner Culler, as recited in currently pending independent claims 47 and 52, as depicted particularly in Figs. 3 and 11-13 of the drawings, and as described in detail in the Substitute Specification, the subject invention is directed to a roller for use in at least one of an inking system and a dampening system of an offset rotary printing press. As may be seen in Fig. 3, the offset rotary printing press, generally at 300, uses cooperating forme cylinders 304 and transfer or blanket cylinders 303 to form ink images on both sides of a web that is passing between the two transfer cylinders. Suitable ink for application to the forme cylinders 304 is supplied by inking

system 305. If needed, dampening fluid is provided by dampening system 306. Since the systems above and below the web are essentially the same, only the systems located above the web, as seen in Fig. 3, and of which the roller recited in the claims is a part, will be described in detail.

The inking system 305 includes an ink fountain 311 which acts as a supply reservoir for the ink. A duct roller 313 takes ink from the ink fountain 311 and distributes it, through an ink roller chain, to the forme cylinders. As ink distributor roller 316 is driven for rotation and is also driven for traversing movement. In a similar fashion, the dampening system, generally at 306, includes a dampening fluid reservoir 332, a dipping roller 330 that will receive dampening fluid from the reservoir and a dampening system distribution roller 329. The distributing roller 329 is positively driven, in a manner similar to that of the first ink distribution roller 316 and is also caused to move in a traversing direction.

As may be seen more clearly in Fig. 12, and using the dampening fluid distribution roller 329 and the dipping roller 330 as examples, the distribution roller 329 is supported for movement toward and away from the dipping roller 330. Distribution roller 329 is also movable transversely in an axial direction of the roller.

As may be seen in Fig. 12, the dampening system distribution roller 329 is positively driven by a rotary roller drive mechanism, which is depicted at the left side of the roller body 329, as seen in Fig. 12. This roller 329 is also positively driven for traversing movement by a roller traversing drive mechanism 374. Each of these drive mechanisms is supported with the roller so that each is movable with the roller. In Figs. 11 and 12, there are depicted lever arms 364 and 366 for the two rollers 329 and 330,

respectively. These levers support these two respective rollers so that each such roller can move in a direction which is generally perpendicular to the axis of rotation of each such roller. It is to be kept in mind that instead of these levers, eccentric bushings could be used to accomplish the same task, as described in paragraph 0078 of the Substitute Specification. It is also to be kept in mind that while the depiction in Figs. 12-14 is of the dampening system rollers 329 and 330, the description is equally applicable to the inking system rollers 316, 317, 318.

In the Final Office Action of February 3, 2010, claims 47, 48, 50, 51 and 54-56 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. published patent application No. 2004/0107849 to Christel in view of U.S. patent No. 4,729,309 to Saterini and further in view of U.S. patent No. 4,690,052 to Junghans. Claims 49 and 57-60 were rejected under 35 U.S.C. 103(a) as being unpatentable over Christel in view of Saterini and Junghans and further in view of U.S. patent No. 5,826,508 to Komori. Claims 52 and 53 were rejected under 35 U.S.C. 103(a) as being unpatentable over Christel in view of Junghans and Komori.

As discussed with Examiner Culler during the telephone interview of April 27, 2010, there are various substantial differences between the subject invention, as recited in the currently pending claims, and in the various references that are cited and relied on, taken either singly or in combination. It is also believed that the combination of references relied on by the Examiner would be inappropriate. The several references are taken from different areas of the printing art and would not be combinable. Teachings in a patent directed to offset printing would not be usable in a patent directed to flexographic printing. One of skill in the art would readily understand

that the two fields of art are not combinable.

The Christel published patent application, No. 2004/0107849 was cited as having a roller that can be used in at least one of an inking system and a dampening system. The undersigned does not disagree with that broad characterization. However, Christel was further cited as having a rotary drive motor adapted to rotate that roller about an axis of rotation of the roller. The Examiner relied on paragraphs 92 and Fig. 7.

In Fig. 7 of Christel, there is shown an offset printing press with an inking system 21 and a dampening system 22. Plate cylinders 02 and 11 are driven by motors M. These motors are not the ones that drive the inking rollers and the dampening rollers. It is not clear, from a reading of the Christel reference, where such roller drive motors would be located. It is stated that the inking system 21 and the dampening system 22 can each have their own drive motors. It is not clear where those motors would be. Both of currently amended independent claims 47 and 52 recite that the claimed rollers have their own roller rotary drive mechanism and that such a roller rotary drive mechanism is located at one end of the roller body and is supported for movement with the roller body in a direction that is perpendicular to the roller body axis of rotation. Christel clearly does not show, or suggest, such a structure.

The secondary reference to Saterini, U.S. patent No. 4,729,309, was cited to show a roller having a rotary drive motor and means 7 for supporting that roller and the drive motor for movement in a direction perpendicular to the roller axis of rotation. In support, the Examiner relied on column 5, lines 4-47 and Fig. 1.

As discussed with Examiner Culler, the Saterini reference is directed to a flexographic printing device, not to an offset printing device. The asserted roller in

Saterini is a counter-pressure cylinder 6 that is selectively usable with either a first printing cylinder 16d or a second printing cylinder 16s. The counter-pressure cylinder 6 is suspended between spaced levers 7 and can oscillate or move between contacting printing cylinder 16d or contacting printing cylinder 16s as would a pendulum of a clock.

The counter-pressure cylinder 6 of Saterini is not in a roller train between one of an ink supply roller and a dampening fluid supply roller and a forme cylinder. In Saterini, ink is provided by an ink holder 26 to a rubber-layered cylinder 28 and then to an anilox roller 30. The anilox roller 30 is in direct contact with the printing cylinder 16d. A similar arrangement is provided to supply ink to the printing cylinder 16s.

As may be seen in Fig. 2, each one of the counter-pressure cylinders 6, the printing cylinder 16d, the anilox roller 30 and the rubber layered roller 28 has its own drive motor. However, none of these drive motors are recited as being movable with their respective rollers or cylinders. Only the counter-pressure 6 of Saterini is movable. There is no teaching or suggestion that its drive motor 74 is movable. Additionally, as described above, it would not be appropriate to combine the Saterini patent and the Christel application because they are very different kinds of printing devices.

The secondary reference to Junghans, U.S. patent No. 4,960,052, was cited as teaching a roller 10 having means for supporting it for traversing movement. As was discussed with Examiner Culler, the Junghans patent is directed to an offset printing unit and is thus generally similar to Christel in its general operation. As may be seen in Fig. 1 of Junghans, ink is placed in an ink fountain 1 and is removed by a slowly rotating ink fountain roller 2. That ink is transferred across a film gap 4, to a film roller 3. The ink applied to the film roller 3 then contacts an intermediate roller 9 which removes a

portion of the ink from the surface of the film roller 3. An ink removal ductor roller 10 takes the ink from the surface of the intermediate roller 9 and returns it to the ink fountain 1. Any ink that remains on the ink film roller 3, after that roller has contacted the intermediate roller 9, is transferred to the inking unit roller 5 and eventually is delivered to the plate cylinder 7.

It is to be noted that claims 47 and 52 require that the roller be located in the roller train from the supply rollers to the forme cylinder. The ink removal ductor roller 10 of Junghans is clearly not in that roller train. It is in a separate roller chain whose sole purpose is to return excess ink back to the ink fountain 1. It is further to be noted that the ink removal ductor roller does not have its own drive motor. It can be moved axially by a hydraulic cylinder or ram, as discussed at column 6, line 15, or by some other device. However, there is no discussion of such a device being located at one of the ends of the ductor roller or of it being supported with the roller body for movement in a direction that is perpendicular to the axis of rotation of the roller. While Junghans and Christel are both directed to offset printing devices, the Saterini device is not. Again, it is not clear to the undersigned how the three reference could be combined to arrive at the subject invention, as recited in currently pending independent claims 47 and 52.

As was also discussed with Examiner Culler by telephone on April 27, 2010, the secondary reference of Komori, U.S. patent No. 5,826,508, does not show the features of the subject invention which are missing from the previously discussed references. In Komori, an ink fountain 13 is provided and in which an ink fountain roller 10 transfers ink to an ink ductor roller 16. That ink ductor roller 16 shifts between a first contact portion in engagement with the ink fountain roller 10 and a second contact portion in

engagement with an oscillating roller 15. Shifting of the ink ductor roller 16 is accomplished by a pivoting movement of swing levers 28 that are attached to an ink ductor shaft 20. That shaft is caused to rotate by the movement of a cam lever 21. The cam lever 21 has a cam follower 25 which rides on a cam 24, all as seen in Fig. 1. The cam 24 is rotated by being part of a driven sprocket which is caused to rotate in response to a chain drive from a drive sprocket 26. As may be seen in Fig. 2, a drive motor 35 is used to drive the plate cylinder 2. A gear mechanism 38 is driven from the plate cylinder 2 and it is that gear mechanism 38 which drives the sprocket 26 that causes the ink ductor roller 16 to shift between the first and second contact positions.

The oscillating roller 15 is driven by an oscillating mechanism 37 which is also driven by the plate cylinder 2. That oscillating mechanism 37 is recited as being disclosed in Japanese Utility Model Publication No. 4-39008. The undersigned has reviewed that document and has noted that the Japanese document disclosed a swash plate drive for an arm which causes a roller 22 to oscillate.

It was asserted that Komori shows an oscillating gear at an end of a roller. In fact, as discussed above, Komori does not show any gear attached to the end of a roller. It relies on the disclosure of JP 4-39008 which also does not show an oscillating gear at the end of the roller that is being oscillated or moved in the direction of that roller's axis of rotation.

The Examiner's Response to Arguments section of the Final Office Action of February 3, 2010, has been reviewed. It is respectfully submitted that, as discussed above, Saterini does not show a roller with a drive motor supported on its axis and does not teach any means for traversing the roller in an axial direction. In fact, the only

"roller" of Saterini that moves at all is the counter-pressure cylinder 7. That cylinder shifts in a direction which is perpendicular to its axis of rotation. The drive motor for cylinder 7 is depicted in Fig. 2 and is not axially aligned. With respect to the Junghans reference, the ink ductor roller 10 is the one that moves in the direction of its axis of rotation. The Junghans reference does not appear to show a roller that moves in a direction which is perpendicular to the axis of rotation.

It is believed that currently amended independent claims 47 and 52 are patentable over the prior art cited and relied on for the reasons set forth above, and as discussed with Examiner Culler by telephone on April 27, 2010. All of the rest of the claims that are now pending in the application depend from one or the other of believed allowable independent claims 47 and 52. All of those claims are also believed to be allowable.

During a review of the Substitute Specification, it was noted that paragraph 0082 had several minor errors. These have been corrected in currently submitted replaced paragraph 0082. These minor changes do not constitute any new matter. Their entry is respectfully requested.

SUMMARY:

Paragraph 0082 of the Substitute Specification has been amended, without the addition of new matter, to correct several minor errors. Independent claims 47 and 52, as well as various ones of the dependent claims, have been amended. It is believed that all of the claims now pending in the subject application are patentable. A Request for Continued Examination (RCE) is being filed concurrently to provide the Examiner with sufficient time to fully consider the Second Amendment. Allowance of the claims and passage of the application to issue is respectfully requested.

Respectfully Submitted,

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